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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,909	03/31/2003	Hiroshi Akamine	220297US0 XPCT	2996

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

BOYKIN, TERRESSA M

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 08/04/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/070,909

Applicant(s)

AKAMINE ET AL.

Examiner

Terressa M. Boykin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: A person shall be entitled to a patent unless --(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 5463013 see abstract cols. 2-8, example 1 and specific excerpts below.

USP **5463013** relates to a modified aromatic polycarbonate resin, a molded article thereof, a composition thereof, and a substituted phenol compound used for the modification of an aromatic polycarbonate resin. It also relates to a modified aromatic polyester carbonate resin and a modified polyarylate resin. In particular, it relates to a modified aromatic polycarbonate resin which retains the excellent transparency and mechanical properties of an aromatic polycarbonate resin and has improved melt fluidity and tracking resistance and a molded article thereof.

Further, when the modified aromatic polycarbonate resin of the present invention is mixed with a filler of glass having a refractive index of which the difference from the refractive index of the modified aromatic polycarbonate resin is within a predetermined range, the mixture gives a resin composition having improved transparency and excellent properties.

The reference discloses a resin composition comprising 40 to 95% by weight of the modified aromatic polycarbonate resin of the present invention and 60 to 5% by weight of a filler of glass having a refractive index of which the difference from that of the modified aromatic polycarbonate resin is 0.01 or less, and a molded article formed therefrom.

The refractive index difference between the modified aromatic

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polycarbonate resin and the above filler of glass is 0.01 or less, preferably 0.005 or less. When this difference exceeds 0.01, the transparency decreases. The filler of glass may have any one of the forms that can be generally applied to a thermoplastic resin such as a fiber, granules, flakes, plates. The reference notes that then the filler has the form of a fiber, preferably, the diameter is 3 to 25 μm and the fiber length in a molded article is approximately 0.02 to 0.5 mm. Further, the filler of glass may be surface-treated with a silane-coupling agent for increasing the affinity with the resin, and it may be also subjected to a binding treatment with an epoxy resin, an acrylic resin or a urethane resin for improving the handling properties. The amount of the filler of glass is 5 to 60% by weight, preferably 10 to 55% by weight. When this amount is less than 5% by weight, it is difficult to obtain a sufficient effect on the reinforcement with glass. When it is more than 60% by weight, undesirably, the moldability of the composition decreases. Note that the reference states that or improving an aromatic polycarbonate resin in the melt fluidity, the reference discloses that there is proposed a method in which the average molecular weight of the aromatic polycarbonate resin is decreased to the lowest level possible, a method in which a *plasticizer* is added, a method in which the polymer terminal is provided with a long-chain aliphatic hydrocarbon substituent or a method in which a polymer blend is formed.

With regard to claims 3, 6 and 7, the modified aromatic polycarbonate resin of the present invention can be molded by any one of an injection molding method, a compression molding method, an extrusion molding method and a solution casting method.

With regard to claim 4, the modified aromatic polycarbonate resin of the reference states that it may contain additives such as a heat stabilizer, an antioxidant, a light

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stabilizer, a colorant, an antistatic agent, a lubricant and a mold release agent and inorganic fillers such as a glass fiber, glass beads, a carbon fiber, a metal fiber, talc and silica. Further, it may be used as a blend with other polycarbonate resin or other thermoplastic resin.

With regard to claim 5 note that the reference states in Example 1 that polycaprolactone was present in the reaction product which would thus mean that a polycaprolactone was employed: "Example 1-(i) was repeated except that the amount of m-hydroxybenzyl alcohol was changed to 68.9 parts. The resultant reaction product had a hydroxyl value of 26 mg KOH/g and an acid value of 1.5 mg KOH/g. The yield thereof was almost quantitative. The NMR chart thereof showed that the reaction product was a poly- ϵ -caprolactone terminated with phenol ($n=18$ on average). This reaction product is abbreviated as "substituted phenol compound C" hereinafter."

With regard to claims 7, and 12 the reference states that the modified aromatic polycarbonate resin has excellent properties and may be used as a raw structural material for a variety of electric and electronic parts and optical parts, and a molded article thereof.

With regard to claims 8 - 11 note that the reference states that the resin composition may contain a variety of other heat stabilizers and antioxidants as required. Examples of the heat stabilizers include triesters, diesters and monoesters of phosphorous acid such as diphenyl phosphate, trisnonylphenyl phosphite, tris(2,4-di-tert-butylphenyl)phosphite, tridecyl phosphite, trioctyl phosphite, trioctadecyl *phosphite*, didecylmonophenyl *phosphite*, dioctylmonophenyl *phosphite*, diisopropylmonophenyl *phosphite*, monobutyldiphenyl *phosphite*, monodecyldiphenyl *phosphite*, monooctyldiphenyl *phosphite*, bis(2,6-di-tert-butyl-4-methylphenyl)pentaerythritol diphosphite, 2,2-methylenebis(4,6-di-tert-butylphenyl)octyl *phosphite*, bis(nonylphenyl)pentaerythritol diphosphite, bis(2,4-di-tert-butylphenyl)pentaerythritol


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diphosphite and tetrakis(2,4-di-tert-butylphenyl)-4,4-diphenylene phosphonate. These heat stabilizers may be used alone or in combination. Further that the composition may be also subjected to a binding treatment with an epoxy resin, an acrylic resin or a urethane resin for improving the handling properties.

Consequently, as noted above, the reference discloses a polycarbonate prepared from the same components and method as claimed by applicants. Thus, in view of the above, there appears to be no significant difference between the reference and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. As a result, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Terressa Boykin, via the receptionist whose telephone number is (703) 308-2351. The examiner can normally be reached on Monday through Thursday from 8:00a.m.-5:00p.m.


Examiner Terressa Boykin
Primary Examiner
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